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## MARKET-CROSSES. III.



### THE BUTTER-CROSS, WINCHESTER.

In concluding our notice of Market-Crosses, nothing remains but to present a list of the more remarkable structures of this kind, as afforded by Mr. Britton's work, from whence also we gain the accompanying illustration.

The principal market-crosses now remaining in England are:

1. At Salisbury. This cross is a hexagonal structure resting on six buttresses, and a large central column. Round the summit is an open parapet, with a series of six canopied niches.
2. At Cheddar, in Somersetshire.
3. At Malmesbury, in Wiltshire. These two crosses have been already described.
4. Chichester Cross, which appears to have been erected about 1480, is the most enriched and beautiful example of this class of buildings in England. It is an octagon, with buttresses at each angle, terminated by

crocketed pinnacles. Over each arch, which has a crocketed hood moulding, the wall is adorned with panneling, and coped with a rich open-worked embattled parapet. Flying buttresses extend from the parapet to a central turret, which is adorned with niches and sculpture.

5. The cross at STOURHEAD, formerly in the College green, Bristol, is similar in general form and style of design to that of Winchester; as were those of 7. GLOUCESTER, and 8. COVENTRY, except in having solid pedestals or shafts.

9. 10. "The crosses at WINCHESTER and LEIGHTON BUZZARD," says Mr. Britton, "though in the open streets, and usually resorted to by market people, do not strictly belong to this class. They are open at bottom, but afford only a slight degree of shelter. Both are of small dimensions, and consist of three stories or divisions in height; each also rests on four buttress piers, with a single shaft in the centre. They were adorned with statues in canopied niches."

The cross at Winchester is a very elegant structure, supposed by some to have been erected in the reign of Henry the Sixth, and by others in the time of Edward the Third. It is divided into three stories, and consists of a central square pier, with four smaller ones at the angles, all terminating in purfled pinnacles, and the whole decorated with niches, pediments, &c. It appears originally to have had four statues, only one of which remains. Mr. Milner, the historian of Winchester, supposes this statue to represent St. Laurence, or St. Amphiballus, though generally said to be an effigy of St. John the Evangelist. The figure is that of a young man in the Romish dress, with short hair, and the breast uncovered, bearing a palm branch, the sure token of a martyr, in the right hand, and in the left a small square mass which in its original perfect state might have represented a book. The appropriate emblems of St. John are wanting. This statue formerly stood on the south side of the cross, to the obscurity of which situation we are probably indebted for its preservation, when those on the three more exposed sides were demolished. This figure was removed some years ago, to the niche on the west side.

This structure is now called **THE BUTTER-CROSS**, because the retail dealers in that article are accustomed to assemble round it. Like most structures of the kind it has suffered much from the influence of the weather, but more from the wantonly careless practice of the populace, who on occasions of public rejoicing stick lighted candles and other blazing objects about it.

The top of this cross was originally ornamented with a crown, and four small niches with statues in them. It now measures forty-three feet and a half from the ground to the summit. The lower tier of arches is seven feet ten inches high, and the statue is five feet ten inches high.

Mr. Milner relates an anecdote of this cross, that when the city was being paved, some of the commissioners sold the city cross to a gentleman then living in the neighbourhood, who was preparing to remove it, for the purpose of adorning his pleasure-grounds, when the inhabitants at large, with a just indignation, rose in defence of this their ancient civic monument, drove away the workmen, and demolished the scaffolding erected for the purpose of taking it down. No further attempt has been made to remove this fine old cross from its present appropriate position.

**SUCH** is our extensive ignorance, that to know it would be a very considerable stock of knowledge.

It is almost impossible that he can be other than a religious character who is conversant with the Almighty in his works, in all the goings-on of nature. He feels himself a dependent being, morning and evening, on the great Ruler of the universe; he holds converse with him in the cloud and the storm—on the misty mountain and the darksome waste—in the whirling drift and the overwhelming thaw—and even in voices and sounds that are only heard by the howling cliff or solitary dell. How can such a man fail to be impressed with the presence of an eternal God, of an omniscient eye, and an almighty arm?—HOGG.

In very deed we believe our religion truth, because it best explains the mysteries of our nature, the strange origin of our being, its strange winding-up; but were it even false, who would not yet wish for its delusive hopes in the awful extremity of the last hour, when a man turns to the wall and lies still, because he knows he must die? On the last shoal of time, the "majesty of darkness" receiving us, when no brother is there, when no candle is there, nor any revelation, that the thought of man can produce, save hope or fear that at best are but thin spectre-ships on the unseen ocean that fast washes off our narrow footing, glimpsing away, but whither? O, who shall not bless that Holy Religion that lightens on this black anxiety.—AIRD.

## CAST-IRON LIGHTHOUSES.

ONE of the characteristics of this country is the mode in which we lay out the mineral wealth which nature has bestowed upon us so abundantly in the shape of coal and iron. With the assistance of the former we mould the latter into a thousand shapes of usefulness, neatness, and durability, and so much attached are we to this material that it is daily superseding the more bulky wood and stone, and other substances which were previously in great demand. Iron furnishes most of the multifarious instruments required in the mechanical and agricultural arts, it ministers alike to war and to peace, by furnishing the sword and the ploughshare. It supplies some of the most useful domestic apparatus for the kitchen, the parlour, and the bedroom, and now even the bedstead itself may be formed of iron. It has long been used in some of our great public works; we have iron roads, iron bridges, iron statues, steam-boats of iron, houses of iron, and, lastly, iron lighthouses.

The suggestion of metallic lighthouses originated a few years ago with Captain Sir Samuel Brown, when it was proposed to place a lighthouse on the Wolf Rock, near the Land's End, a position where it would be exposed to the most violent storms of the Atlantic. A plan for erecting a stone light-house on the spot was drawn up by Mr. Stevenson, which Captain Brown thinks, would require fifteen years for its execution, and cost 150,000*l*. Captain Brown undertook to erect one of bronze, ninety feet high, for 15,000*l*, and to complete it in four months. This plan, from whatever cause, was not entertained, and with the exception of a small lighthouse erected on the Gravesend pier, metallic lighthouses excited no attention until the last year (1842), when application was made to some English engineers by the Commissioners appointed to light a dangerous point in the Island of Jamaica called Morant Point, for the erection of a suitable lighthouse at the smallest possible cost. On this occasion Mr. Gordon proposed the erection of a cast-iron structure, resembling in outline the round towers of Ireland. His plans and estimates having been accepted, they were executed with remarkable celerity, and from an account furnished by Mr. A. R. Penton we derive the following particulars.

The advantage which iron, when not in contact with sea-water, possesses over stone or other materials, is, that upon a given base a much larger internal capacity for dwellings and stores can be obtained with equal stability. With this material plates can be cast in large surfaces, and with but few joints. A system of bonding the plates may also be adopted, which will ensure the perfect combination of every part so as to form an entire mass, and thus the best form for strength and stability can easily be obtained. From the comparatively small bulk and weight of the component parts of the structure, great facilities are afforded for transporting and erecting it. Thus in less than three months from the date of the contract, the lighthouse about to be described was cast and erected on the contractor's premises, and it was expected to have the light exhibited in Jamaica in three months more. The whole expense was said not to exceed one-third the cost of a similar building in stone.

The structure was to be founded on a coral rock a little above the level of the sea; the face of the rock is about ten feet above the surface of the sand, and was to be excavated to receive the base of the tower, resting on and cased with granite to prevent the natural filtration of the sea-water from acting on the iron. This course of granite is grooved to receive the flange of the lower plates of the tower, from which lightning conductors are to be continued to the sea. The tower is of course itself a lightning conductor of the best kind. The diameter of the tower shaft is eighteen feet six inches at its base, diminishing to eleven feet under the cap; it is formed of nine tiers of plates, each ten feet in

height, varying from one to three-fourths of an inch thick. The circumference is formed of eleven plates at the base, and nine at the top; they are cast with a flange all round the inner edges, and when put together these flanges form the joints, which are fastened together with nut and screw bolts, and caulked with iron cement. The cap consists of ten radiating plates, which form the floor of the light room; they are secured to the tower upon twenty pierced brackets, and are finished by an iron railing. The lower portion, namely, twenty-seven feet, is filled up with masonry and concrete, weighing about three hundred tons, and so connected with the rock itself as to form a solid core of resistance. The remaining portion of the building is divided into store-rooms and berths for the attendants in the lighthouse.

The light room consists of cast-iron plates five feet high, on which are fixed metal sash-bars filled with plate glass; these terminating with a point are covered with a copper roof, whence rises a short lightning rod, trebly gilt at the point. The light is of the revolving kind, consisting of fifteen Argand lamps and reflectors, five in each side of an equilateral triangle, and so placed as to constitute a continuous light with periodical flashes. The Admiralty notice which announced the light for exhibition on the 1st of November, 1842, states that the centre of the light is ninety-six feet above the level of the sea, and in clear weather the light can be seen from a distance of twenty-one miles.

To preserve as low a temperature as circumstances and the climate will permit, the iron shell is to be lined with a non-conducting material, as slate or wood, leaving an annular interstice, through which a constant ventilation will be effected so as to carry off excessive heat. To preserve the two lower tiers from rusting, they are coated with coal tar. The tower itself is painted white. The only bracing which has been thought necessary is a few cross tiers at each horizontal joint, over which the iron-tongued wood floors are laid.

The several rooms are provided with five apertures, fitted out with oak sashes filled with plate glass. The approach to the door-way, which is about ten feet above the level of the sand, will be by means of stone steps; ladder irons are also provided in the event of the stone steps being carried away by a hurricane.

Over the entrance is a large tablet of iron, supported by two smaller ones; and on them, in bas relief, are inscribed the date of erection (1842), the names of the commissioners, of the engineer, founder, &c.

The whole of the castings were executed at the foundry (late Bramah and Robinson's) at Pimlico, and put together in the yard of the manufactory, prior to their removal to Jamaica, where the work was proposed to be re-erected by a derrick and crab from the inside, without the aid of any external scaffolding.

The whole expense of the lighthouse, including the passage over the Atlantic, was not to exceed 7000*l.*; the entire weight of the iron work is about one hundred tons. The masonry has been prepared in this country, which, from the absence of building stone in Jamaica, has been more economical than if the work were done on the spot; three mechanics were sent out with the work to put it together on its destined spot. The elevation of the lighthouse above the level of the sea is one hundred and three feet.

The situation of the keepers in a lighthouse of this description is apparently much more insecure than that of the keepers of a stone lighthouse, for they are suspended, in mid-air, on the top of a pillar, which appears little more than a tall rod. Their condition has been thus described. "Cooped up in a cage, one-half of whose floor projects over the sea, or standing on a gallery which hangs over it completely, they live for months together without exchanging words or thoughts with their fellow mortals. There they pass the dark and stormy nights with the winds howling, and sea birds shrieking around them, while the abyss foams and rages below, and the slen-

der stem that bears them above it quivers under their feet when struck by the angry surge, or beaten by the tempest. No situation can be conceived more dismal and monotonous, more beset with terrifying circumstances, or better calculated to impress the mind with a constant feeling of insecurity. Such, however, is the force of habit in reconciling men to outward circumstances, which appal at first sight, and to real and formidable dangers too, that there is never any want of candidates for the most hazardous employments; and no difficulty is, we believe, apprehended in getting sober, considerate persons to commit themselves to these sea-girt, aerial cradles; nor any doubt felt that after a month's experience they will sleep secure in them, though lullabied by storms and tempests, the aspect of which in such a situation would drive a greenhorn landsman mad."

WHEREVER the appearances of the material world are expressive of the qualities we love or admire; wherever, from our education, our connexions, our habits, or our pursuits, its qualities are associated in our minds with affecting or interesting emotion; there the pleasures of beauty or sublimity are felt, or at least are capable of being felt. Our minds, instead of being governed by the character of external objects, are enabled to bestow on them a character which does not belong to them, and even with the rudest or the commonest appearances of nature, to connect feelings of a nobler or a more interesting kind, than any that the mere influences of matter can convey. It is hence that the inhabitant of savage and of barbarous countries clings to the rocks and deserts in which he was nursed; that if the pursuit of fortune unhappily forces him into the regions of fertility and cultivation, he sees in them no memorials of early love, or of ancient independence, and that he hastens to return to the rocks and the deserts which spoke to his infant heart, and amid which he recognises his first affections and his genuine home. It is hence that in the countenance of her dying infant, the eye of the mother discovers beauties which she feels not in those who require not her care; and the bosom of the husband, or the friend, glows with deeper affection when he marks the advances of age or disease over those features which first awakened the emotions of friendship or love. It is hence, in the same manner, that the admiration turns involuntarily from the forms of those who possess only the advantages of physical beauty, to rest upon the humbler forms which are expressive of genius, of knowledge, of virtue; and that in the public assemblies of every country, the justice of national taste neglects all the external advantages of youth, of rank, or of grace, to bestow the warmth of its enthusiasm upon the mutilated form of a warrior who has extended its power, or the grey hairs of the statesman who has maintained its liberty.—ALISON.

WHILE our best affections are fixed on anything in this world, they must always give us pain; but when once they are fixed on Infinite Perfection, as their ultimate object, the subordinate exercises of them will furnish many sources of pleasure and advantage, and should be cultivated both with a view to present and future happiness.

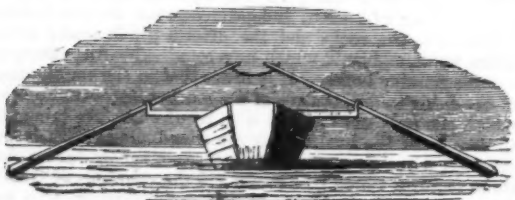
THOSE who are freed from cares and anxieties, who are surrounded by all the means of enjoyment, and whose pleasures present themselves without being sought for, are often unhappy in the midst of all, merely because that activity of mind, in the proper exercise of which our happiness consists, has in them no object on which it may be employed. But when the heart is sincerely and affectionately interested for the good of others, a new scene of action is continually open; every moment may be employed in some pleasing and useful pursuit. New opportunities of doing good are continually presenting themselves, new schemes are formed and ardently pursued; and even when they do not succeed, though the disappointment may give pain, yet the pleasure of self-approbation will remain, and the pursuit will be remembered with satisfaction. The next opportunity which offers itself will be readily embraced, and will furnish a fresh supply of pleasures; such pleasures as are secure from that weariness and disgust, which sooner or later are the consequences of all such enjoyments as tend merely to gratify the selfish passions and inclinations, and which always attend on an inactive state of mind, from whatever cause it may proceed; whether it be the effect of satiety or disappointment, of prosperity, or despair.—BOWDLER'S *Essays*.



## ON THE PRESENT STATE OF THE ARTS IN ITALY.



ITALIAN BOATS.



To gain a distinct account, from time to time, of the state of the arts and sciences in foreign countries, and of the progress which is made in their different departments, by our continental neighbours, is desirable on several accounts. There is still too much of the feeling abroad, that England, the queen among nations, and mistress of the seas, is so pre-eminent in knowledge, so superior over all other nations in everything good and great, that her duty simply lies in diffusing, as from an unfailing internal source of her own, the riches of knowledge and wisdom to other nations. There is too much of a disposition among the less instructed portions of the community, still to look with contempt upon foreigners and their productions, and to suppose that in every department of art and science Englishmen must needs be intrinsically superior, though less showy in their acquirements. Proud as we are of the many points of superiority in our dear native land, over every other country on the face of the globe, and thankful as we are, in particular, for her civil and religious rights and privileges, we should yet delight to see this national vanity lowered, and something like a just appreciation of the merits of other nations taking its place.

In these days of travel, numbers of our fellow-countrymen have an opportunity of examining for themselves the state and progress of the people of foreign lands; but there are multitudes who have no opportunity, either by personal observation, or by study, of gaining this kind of knowledge, and this is the class described as being liable to the prejudices before-named.

For the sake of such persons we are glad when a popular notice of the state of the arts and sciences in other countries is brought before the public. Of this description is a paper read before the Society of Arts, in Scotland, November 23rd, 1840, and since published in the *Edinburgh Philosophical Journal*. It contains Mr. Wilson's remarks on the state of the arts in Italy,

and being worthy of more extended circulation, we present the substance of it to our readers.

To commence with the works of the architect, mason, and house decorator. Although the architects of Italy have but little scope for the display of their ability, on account of the decrease of population, which, except in parts of the Austrian states, has shrunk away from the number required to occupy the palaces, villas, and houses which already exist both in town and country, yet some few works of great magnitude are going on in Italy, and in these, taste of design, magnificence in material, and solidity of construction, are displayed. The restoration of the Basilica of St. Paul's at Rome is an immense undertaking, to effect which, contributions, either in money or materials, have been obtained from various countries. It is to be remarked that the various buildings belonging to the government, whether churches, colleges, or hospitals, have generally been built on a scale of magnificence which has never been excelled, in some instances never equalled, in other countries. The desire to enrich and restore ecclesiastical edifices which prevails in Rome, is illustrated by a fact related of the celebrated Gonsalvi. When this cardinal visited England during the reign of George the Fourth, he was presented, by that monarch, with a snuff-box of unusual magnificence and value. This splendid gift, which might have been expected long to remain among the relatives of the cardinal as a memorial of his majesty's friendship, was, in his will, directed to be sold, and the proceeds applied to build the front of a church, which needed completion.

Mr. Wilson tells us that the passion which all pontiffs have displayed for building, still animates the less potent holders of the papal chair in our day; and, although inhabiting a palace which contains twenty-two courtyards, twelve entrance halls, twenty-two grand staircases, thirteen hundred other staircases, two large chapels, and eleven thousand rooms and galleries, in which miles may be walked without returning on the steps yet each succeeding pope adds or alters, or marks repairs with his sculptured coat of arms.

Notwithstanding the comparatively small employment afforded to Italian architects in the present day, yet there can be no question as to the skill displayed in erecting their designs. The masonry is excellent, and the ancient Roman brick-work is rivalled by that of the present generation; houses are built of brick, in which all the exterior decorations are moulded in that material as perfectly as if executed in stone. The skill with which the Italian workmen build in brick, may be exemplified by the Florentine practice of arching over rooms without centering of any description. Two thin moulds of board, the shape of the intended arch, alone are used; these are placed at each end of the apartment which it is intended to cover in, and pieces of string are stretched from the one to the other, guiding the workman as he advances in the formation of his arch, which he builds, uniting the bricks by their thin edges (greatly thinner than those we use) and trusting entirely to the tenacity and quick-setting of the cement.

Plastering is also carried to a perfection in Italy, of which we have very little idea in this country; rooms are so exquisitely finished, that no additional work in the shape of housepainting is required; but the polish of the plaster, and its evenness of tint, are such as to rival those of the finest porcelain. Sometimes the plaster is fluted, or various designs are executed in *intaglio* upon it, in the most beautiful manner. Scagliola, a very fine preparation from gypsum, is the material chiefly used. An instance of the cheap rate at which this work is done, is afforded in the new ball-room in the Palazzo Pitti grand-ducal residence at Florence, which, including mouldings, figures, bas-reliefs, and ornaments was executed at a cost of two crowns for every four square feet.

A most beautiful art among the Italians, and one which might be advantageously introduced into this

country, is that of making what are termed Venetian pavements. This method of finishing the floors of rooms is conducted in the following manner. In the first place a foundation is made of lime mixed with pozzolana, and small pieces of broken stone; this is in fact a sort of concrete, which must be well beaten and levelled. When this is perfectly dry, a fine paste, as it is termed by the Italians, must be made of lime, pozzolana, and sand; a yellow sand is used which tinges the mixture; this is carefully spread to a depth of one or two inches, according to circumstances. Over this is laid a layer of irregularly broken minute pieces of marble of different colours, and if it is wished these can be arranged in patterns. After the paste is completely covered with pieces of marble, men proceed to beat the floor with large and heavy tools made for the purpose; when the whole has been beaten into a compact mass, and the paste appears above the pieces of marble, it is left to harden. It is then rubbed smooth with fine grained stones, and is finally brought to a high polish with emery powder, marble dust, and lastly, with boiled oil rubbed on with flannel. This makes a durable and very beautiful floor, which in this country would be well adapted for halls, conservatories, and other buildings.

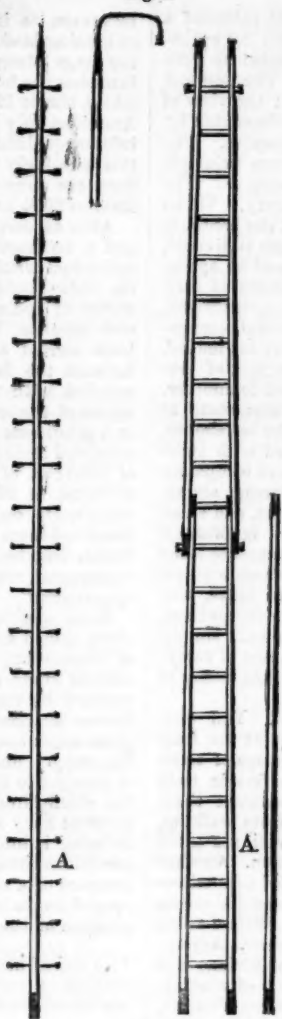
The carpentry of the Italians, as observable in ordinary houses, displays little skill and indifferent workmanship, but in the roofs and floors of important buildings, they satisfactorily prove their knowledge of scientific principles, and several of their designs are well known to British architects.

With regard to the working of iron, in comparison with our system, the Italian is primitive indeed; yet at times they can and do produce very good specimens of workmanship, but at a heavy cost; consequently they are generally content with very ordinary productions. A manufactory of wire, and of driving and screw nails, by means of machinery, now occupies the villa of Mecenas at Tivoli; the articles produced are very well made. Copper is extensively used in Italy, and there are productive mines in the *Maremma Toscana*. The workmanship of articles made of this metal is respectable; various utensils are made of brass in a neat and satisfactory manner, but in the interior finishing of houses, if much nicety is required, articles of foreign manufacture are used.

Housepainters may be mentioned in the last place, and these display much taste and skill; and there is a class of them who greatly excel those in this country, having more the feeling and taste of artists. Surrounded by the finest models in this art, the Italian decorator enjoys every advantage in its study, and he inherits besides from the best periods of art, or rather from antiquity, taste, and a good system of workmanship. He is not a mere machine, employed in the use of the moulds, stamps, and other mechanical contrivances, which too often keep the decorative arts within such narrow limits.

We must now give Mr. Wilson's account of his visit to Orbetello, and of the boats he observed there, one of which is represented at the head of this article. "In the summer of 1833 I made a journey from Leghorn to Rome along the coast, a *terra incognita* to most travellers, my object being to trace the *Via Aurelia*. At Orbetello, the last town in the Tuscan states, besides making some interesting antiquarian discoveries, I observed the boats which

Fig. 2.



ITALIAN LADDERS.

I am about to describe. Orbetello stands upon a peninsula projecting into a shallow lagoon of some extent; the boats which are used upon it are flat-bottomed, rise considerably at the bow and stern, being lowest at midships, across which part of the vessel a beam is fastened, about four inches thick each way, and which projects about two feet six inches over each side. On each of the ends of this beam an oblong piece of plank is nailed, the longest sides being horizontal, and a stout pier rises from each of these. The oars are of considerable length in proportion to the boat, and of great breadth in the blade, which is of the form shown in the drawing. These oars rest upon the pieces of board at the ends of the cross-beam, being attached to the pin by means of a piece of cord, in this last respect resembling a mode adopted in boats on our own coasts. The blade of the oar slightly overbalances the portion within the fulcrum on which it rests, the handles nearly touch each other, meeting amidship. By this contrivance one man can manage a pair of very powerful oars, and can drive a boat, which is apparently but ill adapted from its form for speed, with surprising rapidity through the water; he can arrest its progress, or turn it with equal rapidity and certainty, and with very little exertion.

"My knowledge of boats and ships is indeed very trifling, but I could not help seeing how easily the fisher of Orbetello manœuvred his rude boat; and therefore I have been induced to bring forward this notice of a vessel, and mode of rowing, which I am not aware has been described. Besides, it suggests ideas as to the probable mode in which the ancients managed their triremes, well worthy the attention of the antiquary, especially if he will combine the hint thus obtained with the modes of rowing followed in the Bay of Naples on board the Sorrentine boats, which, I have been led to imagine from an examination of pictures in Pompeii, are much the same in every respect as the galleys which in old times navigated the sea."

Fig. 2 represents the ladders used by architects in Rome in measuring the antiquities, and also by the fire-brigade. Ladders of this light description might well supply the place of the heavy ones carried about in this country: they can be used in one, two, or half a dozen lengths, as may be required, and are put together in a minute or two. With regard to fire-escapes Mr. Wilson recommends the use of a Roman apparatus which he saw in use. When fires happen in England, the lives of several individuals are frequently saved by the simple expedient of holding a blanket into which the sufferers may jump, and thus reach terra firma in safety; but at Rome the fire-brigade is furnished with a large sheet of sailcloth, bound with rope, in which loops are left at convenient distances. At every review of the men, by way of setting an example to the Roman citizens, and showing them what to do if burned out, every fireman jumps from the second story of some chosen house into this sheet; shouts of applause greet the skilful jumpers, and roars of laughter those who precipitate themselves in a less graceful manner.

We shall resume the subject of the State of the Arts in Italy, in a future number

I WILL not willingly offend,  
Nor, yet be soon offended,  
Whate'er's amiss I'll strive to mend,  
And bear what can't be mended.



## A PRACTICAL ENIGMA.

CONCEIVE a spacious building, resembling the palace of a peer, airy, and elevated, and elegant, surrounded by extensive grounds and gardens. The interior is fitted up with galleries, and workshops, and music-rooms. The sun and the air are allowed to enter at every window; the view of the shrubberies and groups of labourers is unobstructed by shutters or bars; all is clean, quiet, and attractive. The inmates all seem to be actuated by the common principle of enjoyment, all are busy and delighted by being so. The house and all around appears a hive of industry. When you pass the lodge, it is as if you had entered the precincts of some vast emporium of manufacture; labour is divided, so that it may be easy and well-performed, and so apportioned that it may suit the tastes and powers of each labourer. You meet the gardener, the common agriculturist, the mower, the weeder, all intent on their several occupations, and loud in their merriment. The flowers are tended, and trained, and watered by one; the humbler task of preparing the vegetables for the table is committed to another. Some of the inhabitants act as domestic servants, some as artizans, some rise to the rank of overseers. The bakehouse, the laundry, the kitchen, are all well supplied with indefatigable workers. In one part of the edifice are companies of straw-plaiters, basket-makers, knitters, spinners, among the women; in another, weavers, tailors, saddlers, and shoe-makers, among the men. For those who are ignorant of these gentle crafts, but are strong and steady, there are loads to carry, water to draw, wood to cut; and for those who are both ignorant and weakly, there is oakum to tease, and yarn to wind. There is in this community no compulsion, no chains, no whips, no corporal chastisement, simply because these are proved to be less effectual means of carrying any point than persuasion, emulation, and the desire of obtaining gratification.

But there are gradations of employment. You may visit rooms where there are ladies reading, or at the harp or piano, or flowering muslin, or engaged in some of those thousand ornamental productions in which female taste and ingenuity are displayed. You will encounter them going to church or to market, or returning from walking, riding, and driving in the country. You will see them ministering at the bedside of some sick companion. Another wing contains those gentlemen who are devoted to intellectual pursuits, or in the amusements and accomplishments of the station to which they belong. The billiard-room will, in all probability, present an animated scene. Adjoining apartments are used as news-rooms; the politicians will be there. You will pass those who are fond of reading, drawing, music, scattered through handsome suites of rooms, furnished chastely, but beautifully, and looking down upon such fair and fertile scenes as harmonize with the tranquillity that reigns within, and tend to conjure up images of beauty and serenity in the mind, which are akin to happiness. But these persons have pursuits, their time is not wholly occupied in the agreeable trifling of conning a debate. One acts as an amanuensis, another is engaged in landscape painting, a third gives himself up to a course of historical reading, and submits to examination on the subject of his studies; a fourth seeks consolation from binding the books which he does not read. In short, all are so busy as to overlook, or so contented as to forget their misery.

Guess, reader, the nature of such an institution. Is it a house of moral improvement, compulsory, though by gentle means? Is it the voluntary refuge of such as are dissatisfied with the world? No. It is a faithful picture of so much as a benevolent science has improved upon the so-called mad-house. The picture is drawn by a practical man, long accustomed to the management of lunatics, who enjoyed under his humane and skilful care all the advantages which he has described, and one to which he has not alluded, that of having so kind and intelligent a superintendent.—*British and Foreign Medical Review*.

In a literary work, as in a building, the parts and portions not seen are amongst the most important. In these the reader is entirely at the mercy of the writer: if he does not act honestly you cannot help yourself. It depends entirely upon the conscientiousness of the contractor that the foundation is well laid, the piles driven home, the stone well-chosen, the bricks sound, the timber well seasoned. All this, and more a great deal, it is the builder only who knows, it is he only who can tell.—*Quarterly Review*.

## INDIAN ISINGLASS

ISINGLASS, as it is well known, is manufactured from the swimming-bladders, or *sounds*, of certain fish. Of these the large sturgeon, caught in several rivers of Russia, furnishes the best, or is the best prepared; selling by wholesale at 10s. to 12s. per pound; whilst the Brazilian or North American only fetches from 2s. 6d. to 3s. 6d., and there are inferior qualities realizing no more than 9d. The value of this seemingly trifling article to Russia may be inferred from the annual imports into England, which vary from 1800 to 2000 hundred-weight.

After an occupation of Calcutta of more than a century, and a territorial possession of Bengal of eighty years, an individual writing anonymously in a periodical, acquainted the Indian public with the novel facts, not merely that the waters of India produced in plenty, fishes that would furnish isinglass, but that a trade in this commodity had long been carried on (it turns out from time immemorial) between the Indian fishermen and the Chinese, who not satisfied with the products of the Ganges, ransacked the whole of the archipelago for parts of fish yielding isinglass, or a gelatinous substance, very much akin to it. They have extended their researches even to Bombay; whence upwards of 5000 cwt. of "shark fins and fish maws" were exported to China in 1837-8; fish maws, though known by name, being quite unknown in their nature till Dr. Royle first described them "to be composed of a sack-like membrane, which had been split open, of a light colour, and semi-transparent, resembling the ordinary qualities of isinglass in appearance."

Some specimens of Indian isinglass forwarded to Europe were valued from 1s. 8d. to 4s. per pound, but the expense of preparation, together with its first purchase and duties of various kinds, rendered the whole cost threefold the amount realized by the sale. Subjected to scientific analysis, the Indian isinglass differs but little from the Russian. It is of so much less market value, partly because it is new, and the supply uncertain, partly from the form in which it is brought to England, which is favourable to adulteration; but chiefly from the want of care in the preparation, an unpleasant fishy smell remaining, which renders it impossible to bring it into use here for culinary purposes. Some importations have, nevertheless, taken place, and there is every prospect of a new and profitable source of commerce being opened to India, if care and capital be applied to the preparation of the isinglass.—*Edinb. New Philos. Journal*.

THE end of hearing and learning is not to fill our heads with notions, or our mouths with talk, but to rectify and direct our affections and conversations.

It is incredible how diversified, and almost innumerable, are the methods provided in the ordinary and natural course of human affairs, for restraining men's excessive inclinations, and forcing them to a compliance with the requisitions of morality, when they are not called to it by their own better feelings. As a great and comprehensive example of this, may be mentioned, the effect of that necessity which lies universally, it may be said, on the human race, to produce their subsistence by their labour. To how many does that necessity hold the place of virtue! How many passions are calmed by it! What tranquillity and strength of mind are induced by continued and regulated toil! How little is now left to his own self-destroying will! What calm hours and peaceful thoughts does silent labour bring! The sun rises bright, the air smells sweet, and the small birds carol contentment to labour going forth from his rustic lodge. How much virtue, too, is there in the frugal thrift that the same necessity has taught to many humble households!

We are not to think, however, that the provision thus made for moral results, independently of a direct cause, is to be considered as if the principles were altogether independent of morality. The moral sense when it is pure and strong, will blend itself with such affections as have now been spoken of, mixing itself in all human life. Even in those minds in which it is not perceptibly strong, there is little doubt that it often acts, when they scarcely perceive it themselves, when the affections by which they are influenced are in harmony with it. But where it is not a governing principle—where it is wanting almost, or altogether, these affections and these necessities will rise up in its place, keeping man within bounds—making him better than he knows, or wills to be—showing by what hand we have been framed.—*BLACKWOOD'S Magazine*.

## SEASONAL WILD-FLOWERS. DECEMBER.

Nor field nor garden now invites  
The rasbling step to new delights.  
Nature to man, and bird, and beast,  
Proclaims a dull unwonted rest.  
Aside the inactive plough is laid.  
The adhesive mould the clotted spade  
Dofies. Beneath the sheltering hedge,  
Beneath the stack's o'erhanging ledge  
The herds and flocks, each cautious form  
Turned backward to the driving storm,  
Crowd fearfully.—MAYN'S Months.

THE wet and dreary season at which we are now arrived offers few incitements to the study of wild flowers; indeed, it is the time of profound torpor throughout almost the whole of the vegetable world. If the lauristinus, the holly, and other evergreens, fence our own abodes, and preserve us from sharing in the universal blank of nature, yet the fields and lanes are peculiarly dreary, with scarcely a single vestige of their past beauty. In very mild winters occasional exceptions occur, and celandine, herb Robert, and other hardy flowers still peep forth; but generally speaking, the lichens, liverworts, and mosses, are the only plants that continue to vegetate amidst the rigours of the season. These have been called the Esquimaux of the vegetable world, because, like those inhabitants of polar regions, they delight in continual cold. In spots where the pine, the birch, and even the arctic raspberry are unable to exist, these singular plants retain their vigour, adhering to the sides of rocks from around which the snow never dissolves. In the arctic regions these cryptogamic plants are much larger and more important than in temperate climates, and are well known to afford the chief sustenance to that indispensable animal, the rein-deer. While our meadows and lanes, for the most part, lie thus desolate, there is yet a little modest flower that is familiar to every eye, and hardy enough to show itself in all seasons. This is, of course, the common Daisy; and if it has been allowed to pass without comment, amidst the profusion that decked the Spring and Summer, we now gladly turn to it as the memorial of brighter days, and the fair promise of those which are yet to come.

Thee nor wind nor storm can tear  
From thy lonely mountain lair;  
Nor the sleety, sweeping rain,  
Root thee from thy native plain.  
Winter's cold nor Summer's heat  
Blights thee in thy snug retreat.  
Child'd by snow, or scorch'd by flame,  
Thou for ever art the same.  
Type of truth, and emblem fair  
Of virtue struggling through despair,  
Close may sorrows hem it round,  
Troubles bend it to the ground,  
Yet the soul within is calm,  
Dreads no anguish, fears no harm;  
Conscious that the Hand which tries  
All its latent energies,  
Can, with more than equal power,  
Bear it through temptation's hour,  
Still the conflict, soothe its sighs,  
And plant it 'neath congenial skies.

The nature of Composite flowers has often been alluded to in our notices of wild flowers, but the daisy presents an interesting example of the structure of such plants, and may well be studied by those who have not a clear idea of it. No better description of composite flowers can perhaps be given than that of a well-known French writer, whose botanical notices are as pleasing as some of his other works are offensive and despicable.

Take (says Rousseau,) one of those little flowers which cover all the pastures, and which everybody knows by the name of Daisy. Look at it well; for I am sure you would not have guessed, by its appearance, that this flower, which is so small and delicate, is really composed of between two and three hundred flowers, all of them perfect; that is,

having each its corolla, stamens, pistil, and fruit. Every one of those leaves, which are white above and red underneath, and form a kind of crown round the flower, appearing to be nothing more than little petals, are in reality so many true flowers; and every one of those tiny yellow things also, which you see in the centre, and which at first you have, perhaps, taken for nothing but stamens, are real flowers. If you were accustomed to botanical dissections, and were armed with a good glass, and plenty of patience, it would be easy to convince you of this. But you may at least pull out one of the white leaves from the flower: you will at first think that it is flat from one end to the other; but look carefully at the end by which it was fastened to the flower, and you will see that this end is not flat, but round and hollow, in form of a tube, and that a little thread, ending in two horns, issues from the tube; this thread is the forked style of the flower, which, as you now see, is flat only at the top.

Next look at those yellow things in the middle of the flower, and which as I have told you, are all so many flowers; if the flowers be sufficiently advanced, you will see several of them open in the middle, and even cut into several parts. These are monopetalous corollas, which expand; and a glass will easily discover in them the pistil, and even the anthers with which it is surrounded. Commonly the yellow florets towards the centre are still rounded and closed. These, however, are flowers like the others, but not yet open; for they expand successively from the edge inwards. This is enough to show you by the eye, the possibility that all these small affairs, both white and yellow, may be so many distinct flowers; and this is a constant fact. You perceive, nevertheless, that all these little flowers are pressed, and enclosed in a calyx which is common to them all, and which is that of the daisy. In considering then the whole daisy as one flower, we give it a very significant name when we call it a *composite flower*.

The common Daisy (*Bellis perennis*) has a creeping root and a leafless flower stalk. The leaves, which are very numerous, lie flat on the ground, and are inversely egg-shaped, slightly hairy, and tapering at the base. The flower-stalks are from two to four inches long, and each bears a single flower, with a yellow conical disk, and a white ray tinged with purple. A variety sometimes occurs with several small stalks, bearing diminutive flowers springing from the principal flower-head. The plant is named from *bellus*, pretty, and from its perennial nature, flowering as it does the whole year round. The true season for its blossoming is however, from March to November.

The poetical allusions to this flower are very numerous. Milton says:

By dimpled brook and fountain brim  
The wood-nymphs, decked with daisies trim,  
Their merry wakes and pastimes keep.—*Comus*.

Cowper notices it in connection with the sports of infancy, and this, perhaps, is the most natural association wherewith to connect the flower, as those can testify who have passed their earliest days among the dew-bespangled meads, where thousands of daisies dot the green, and tempt the eager hand of childhood,

In the spring and playtime of the year,  
That calls the unwonted villager abroad  
With all her little ones, a sportive train,  
To gather kingcups in the yellow mead,  
And prink their hair with daisies.

This little flower did not escape the notice of the Father of English Poetry; on the contrary it was with Chaucer an especial favourite, as the following quaint lines will prove.

Of all the floures in the mede  
Than love I most these floures white and rede.  
Such that men callen Daisies in our town:  
To them I have so great affection,  
As I sayd erst, whan comen in the Maie,  
That in my bedde there draweth me no daie,  
That I nam up, and walking in the mede  
To seen this floure ayenst the sunne sprede,  
Whan it upriseth early by the morrow,  
That blissful sight softeneth my sorow.

Shakspeare also describes the Spring, as the season  
 When daisies pied, and violets blue,  
 And lady-smocks all silver white,  
 And cuckoo buds of yellow hue,  
 Do paint the meadows with delight.

The English name of this flower is derived from its opening its blossoms at the peep of day; hence it was called the eye of the day, or day's eye. It was worn in the days of chivalry both by ladies and by knights, and was considered the emblem of fidelity in love. The beautiful lines written by Burns, on turning up the Mountain Daisy with his ploughshare are pre-eminent among the poetical effusions to which the daisy has given rise. They are given at the end of this article.

In France this flower is called *Marguerite*, after St. Margaret, and also *Paquerette*, because it blossoms most abundantly at the approach of *Pâques* (Easter). St. Louis of France took for a device on his ring, a Crucifix, a Lily, and a Daisy, as the emblem of all he held most dear, religion, his country, and his wife, the name of the Queen being Margaret.

The peculiar value of the daisy is that it wreaths the whole circle of the year.

It smiles upon the lap of May,  
 To sultry August spreads its charms;  
 Lights pale October on his way,  
 And twines December's arms.

While most flowers affect some particular situation, and confine themselves either to the moory mountain or the dewy vale, to the sheltered hedge-row or the open field, this bold floweret

Climbs the hill,  
 Hides in the forest, haunts the glen,  
 Plays on the margin of the rill,  
 Peeps round the fox's den.

Every one must have noticed that the daisy folds its florets together at the approach of night, and also in rainy weather, while during sunshine they are widely expanded. This is a provision for securing the parts of fructification from the effect of moisture, and is common to many flowers of uncertain climates, while those of more settled districts of the earth, are quite destitute of it. To see the daisy thus acting, as if by some power or instinct of its own, for the preservation of its seed, would almost lead one to the belief entertained by some writers, that plants are not without a degree, however low and feeble, of sensation, and capability of enjoyment. It is evident that such a view of the vegetable world is not capable of proof; but there are facts from which its probability is argued, and the final inference as to the value of this probability is drawn from our general belief in the goodness of God. Thus strongly does Macculloch express himself on this subject:—"We do not doubt that the lowest of animals conducing to the enjoyments of superior ones, are themselves allowed their share of happiness; that the rooted and imprisoned creature which is employed in building up islands (the coral animal) is happy in its occupation. It is a narrow and unworthy view of the Deity, to believe that the vegetable world, appearing to enjoy, is not also a happy one, in laying the foundation of all the enjoyment of the animal creation. I not only wish to believe it, but believe it from the *a priori* conclusion alone; nothing but absolute demonstration would overturn that belief; and of this there is no more chance than of the reverse; while there are high probabilities on this side, and nothing but a prejudice to oppose them. I do not envy those who conclude otherwise; but the ridicule which may be thrown on such a belief would be easily retorted on opinions founded in ignorance and neglect, and supported by prejudices."

But leaving these doubtful and mysterious points in the economy of plants, there is enough to admire and wonder at, in what is more evident concerning them; nor can the thoughtful observer of Nature fail to trace on every side the tokens of Divine Benificence, completely supplying the wants of the animal world, by means which at the same time cover the earth with beauty, and minister to the delight of all intelligent beings.

To return to our little daisy. Notwithstanding its poetical celebrity this flower is not much honoured among those who cultivate the soil. Cattle seldom touch it, and therefore it occupies the soil unprofitably so far as they are concerned, but we know not how many minute insects may inhabit its leaves, or how many worms or larvæ may harbour among its creeping roots. The medicinal virtues ascribed to it in former times may be now passed over, as they were in all probability highly exaggerated. The single daisy by long cultivation in richer soils, becomes a double flower, the yellow florets being changed into petals, until all appearance of the disk is lost. Such double flowers are common in cottagers' gardens, being frequently arranged as a formal edging to the borders. They no longer produce seed, but are easily increased by parting the roots; where this is neglected the plants soon degenerate, and the flowers become smaller.

Wordsworth's lines on the daisy, as well as those of Montgomery and others, deserve to be quoted in this place, but they are too long for our purpose, and it is difficult to select where there is so much to admire. One stanza alone from the former writer, in allusion to the opening and shutting of the flower, must suffice.

When smitten by the morning ray,  
 I see thee rise alert and gay,  
 Then, cheerful flower! my spirits play  
 With kindred gladness;  
 And when, at dusk, by dews oppress  
 Thou sink'st, the image of thy rest  
 Hath often eased my pensive breast  
 Of careful sadness.

With this humble, but universal favourite we close our notice of wild flowers, and if it has been impossible, in the space devoted to these monthly notices, to present more than a scanty gleanings from the field of nature, yet the reader may possibly be tempted, by the specimen thus offered, to gather in a larger store during the coming season, and to seek, from the proper sources of information, a more extended knowledge of the characters and uses of the different tribes of plants, especially of those which are indigenous to Britain.

#### TO A MOUNTAIN DAISY.

WEE, modest, crimson-tipped flow'r  
 Thou'st met me in an evil hour;  
 For I maun crush among the stour  
 Thy slender stem;  
 To spare thee now is past my pow'r,  
 Thou bonnie gem.

Alas! 'tis no thy neebor sweet,  
 The bonnie Lark, companion meet!  
 Bending thee 'mang the dewy weat!  
 Wi' speckled breast,  
 When upward-springing, blythe, to greet  
 The purpling east.

Couldst thou blow the bitter-biting north  
 Upon thy early, humble birth;  
 Yet cheerfully thou glinted forth  
 Amid the storm,  
 Scarce rear'd above the parent earth,  
 Thy tender form.

The flaunting flow'rs our gardens yield,  
 High shelt'ring woods and wa's maun shield,  
 But thou beneath the random field  
 O' clod or stane,  
 Adorns the histie stibble-field  
 Unseen, alane.

There, in thy scanty mantle clad,  
 Thy sawy bosom sun-ward spread,  
 Thou lifts thy unassuming head  
 In humble guise;  
 But now the share uprears thy bed,  
 And low thou lies!—BURNS